

10/780,210

**REMARKS**

By this amendment, claims 18-28 are pending, in which claim 28 is newly presented. No new matter is introduced.

The Office Action mailed December 13, 2005 rejected claims 18-23 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement, claims 18-23 under 35 U.S.C. § 102(b) as anticipated by *Huang* (US 6,194,998 B1), and claims 24-27 under 35 U.S.C. § 103(a) as unpatentable over *Huang*.

With respect to the § 112, first paragraph, the Office Action (page 2, item 3) contends: “The **reference** fails to disclose four wire leads while claims 18 and 28 recite four wire leads.” Assuming the statement is correctly stated (“reference fails to disclose”), Applicant does not contest such admission. However, if the Office Action meant to state that Applicant’s Specification fails to disclose claimed features, then Applicant strongly disagrees. First, independent claim 18 recites:

A method for replacing a valve stem, comprising:  
disconnecting **a wire lead** coupled to a valve pin disposed within the **valve stem** from a terminal of a battery;  
replacing the valve stem; and  
connecting **a wire lead** coupled to a valve pin disposed within the **replaced valve stem** with a terminal of the battery.

It is not understood how the Examiner construes the recitation of “a wire lead coupled to a valve pin disposed within **the valve stem**” and “a wire lead coupled to a valve pin disposed within the **replaced valve stem**” to require “four wire leads.” There are never four wire leads at any one moment, as the valve stem is replaced with another valve stem; this appears to be the fault in the Examiner’s reasoning. At best, two separate wire leads are found in claim 18.

Additionally, Applicant respectfully submits that the interpretation adopted by the Examiner is contrary to settled law. Claims should be given the broadest reasonable

interpretation and interpreted in view of the specification; instead the Examiner is reading her own limitations into the claims, and now expects the specification to reflect such limitations. “It is improper for a court to add ‘extraneous’ limitations to a claim, that is, limitations added ‘wholly apart from any need to interpret what the patentee meant by particular words or phrases in the claim.’” *Hoganas AB v. Dresser Industries, Inc.* 9 F.3d 948, 28 USPQ2d 1936 (Fed. Cir. 1993).

Furthermore, Applicant submits that the Specification, e.g., paragraphs [36] and [37], adequately supports the claimed invention, thereby obviating the § 112, first paragraph, rejection.

The Specification discloses (Emphasis Added):

[36] FIG.5 shows the operation of removing and replacing the valve stem of 306 of FIG. 3 in accordance with one embodiment of the present invention. The dealer or other user dismounts the tire from the wheel rim 308 (step 502). **The leads 312a and 314a are disconnected from the battery 304** using the removable connectors 304a and 304b (step 504). The valve stem 306 may be removed and replaced (step 506). **The leads 312a and 314a from the replaced valve stem may be connected to the battery 304** using the removable connectors 304a and 304b (step 508). The tire may be mounted on the wheel rim 308 (step 510) completing the process.

[37] Although the process of FIG. 5 is described in terms of removing and replacing the valve stem 306, the process may be performed in another embodiment by simply removing the valve stem assembly 310 from the valve stem 306 using the valve stem threaded connector 314. In this case, the valve stem assembly 310 is actually removed from the wheel 308. **The leads 314a and 312a are disconnected from the removable connectors 314b and 312b of the valve stem threaded connector 314 and the valve pin or plunger 312 of the valve stem assembly 310. The leads 314a and 312a are connected to the removable connectors 314b and 312b of the threaded connector 314 and the valve pin or plunger 312 of the new valve stem assembly 310.** The new valve stem assembly 310 may be inserted in the valve stem 306 via the valve stem threaded connector 314 completing the process.

Therefore, Applicant respectfully requests withdrawal of the § 112, first paragraph, rejection.

Turning now to the § 102(b) rejection, this rejection is traversed for the following reasons. Independent claim 18 recites, “disconnecting a **wire lead** coupled to a valve pin **disposed within the valve stem** from a terminal of a battery.” Independent claim 21 recites, “disconnecting a valve pin **disposed within the valve stem assembly** from a **wire lead** coupled to a terminal of a battery.”

Dissimilarly, *Huang* discloses (col. 5, lines 42-53; Figs. 2, 4, and 7) the following (Emphasis Added):

When the battery housing 6 is mounted threadedly on the **outer end portion 71** of the valve housing 7, **the battery housing 6 is connected electrically to the valve housing 7 to connect the conductive wire 85** and, in turn, the pressure-sensing device 4 to the negative terminal side 52 of the battery cell 5. At the same time, **the second portion of the second battery contact 65 abuts against the stem body 80a of the valve stem 80, thereby connecting electrically the conductive wire 84** and, in turn, the pressure-sensing device 4 to the positive terminal side 51 of the battery cell 5 via the stem body 80a and the biasing stem 80'. Electric power can thus be supplied to the pressure-sensing device 4 at this time.

Given the above passage, *Huang* specifically discloses use of **contacts**, as apposed to electrically conductive wire used elsewhere in the invention, to make electrical connection between positive battery terminal 51 and stem body 80a. Furthermore, the *Huang* system disposes the **contacts** on the **outer end portion 71** of the claimed unit, as opposed to within the unit where electrically conductive wire 84 resides.

Finally, the Office Action, on page 5, correctly acknowledges that *Huang's* “battery contacts 65 and 90 are not “wire lead” as positively claimed within the present invention. Thus, *Huang* fails to disclose a method for replacing a valve stem (or valve stem assembly), comprising: disconnecting a **wire lead** coupled to a valve pin **disposed within the valve stem** from a terminal of a battery.

Therefore, as anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration, independent claims 18 and 21 are patentably

distinguishable over the prior art and are subsequently in condition for allowance. *See W.L. Gore & Assocs. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983). Accordingly, dependent claims 19, 20, 22, and 23 are in condition for allowance at least for those reasons proffered above, as well as on their own merits.

With regard to the § 103(a) rejection, Applicant respectfully submits that the Examiner has not established a *prima facie* case of obviousness. A prior art reference must be considered as a whole and must suggest the desirability and thus the obviousness of making the proffered substitution. *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5, 229 U.S.P.Q. 182, 187 n.5 (Fed. Cir. 1986). Furthermore, there must be a reasonable expectation of success when making the desired substitution. *Id.*

Independent claim 24 recites, “a valve pin coupled to a first terminal of a battery via a **first wire lead**; and a **threaded connector coupled to a second terminal of a battery via a second wire lead**.” The Office Action admits that *Huang’s* “battery contacts 65 and 90 are not ‘wire’ lead,” as positively claimed. Nevertheless, the Examiner states that these contacts 65 and 90 are functionally equivalent as wire leads.

*Huang’s* first battery contact makes electrical connection to the threaded portion of valve housing 7 via battery housing 6 that is in physical contact with battery 5. Such a configuration does not establish a “threaded connector coupled to a second terminal of a battery **via a second wire lead**” as positively claimed.

Furthermore, assuming *arguendo* that *Huang’s* system could be interpreted to enable substitution of battery contacts 65 and 90 with wire leads, the system would not have a reasonable expectation of operability, i.e., success. Because battery housing 6 is intended to be screwed onto the outer end portion 71 of the valve housing 7, col. 4, lines 56-60, use of short wire leads would prevent battery housing 7 from rotating. Longer wire leads would lead to

excessive bunching, twisting, tangling, and possibly overt stressing of the electro-mechanical junctions between circuit components. Additionally, wire leads would prevent an air compressor head from establishing an appropriate connection when adding air to the tire thus obviating the invention altogether. Furthermore, if a connection could be made, the wires would be crimped and damaged by the process. Finally, detachable connectors could not be used given the limited amount of space available. In all, *Huang* discloses the express design choice for use of battery contacts with a spring force smaller than coil spring 802 over wire leads to enable battery housing 7 to operate as desired, maintain battery placement external to the air tight chamber, and facilitate replacement of battery cell 5. (col. 5, lines 54-63).

Further, MPEP §2144.06 states: “In order to rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot be based on applicant’s disclosure or the mere fact that the components at issue are functional or mechanical equivalents. *In re Ruff*, 256 F.2d 590, 118 USPQ 340 (CCPA 1958).” Applicant submits that one of ordinary skill in the art would not recognize contacts 65 and 90 to be the claimed wire lead.

Thus, a *prima facie* case of obviousness has not been established. Accordingly, Applicant respectfully requests withdrawal of the obviousness rejection and urges the indication that claims 24-27 are allowable.

As for newly added dependent claim 28, this claim recites “wherein the battery is disposed between a wheel rim and a mounted tire such that the valve stem assembly can be replaced by disconnecting the first lead from the first terminal and the second lead from the second terminal.” Applicant submits that these features are absent from *Huang* and furthermore, *Huang* teaches away from such features. (See col. 1, lines 46-56). Moreover, claim 28, which

depends from independent claim 24, is allowable for the reasons proffered for the allowability of claim 24.

Therefore, the present application, as amended, overcomes the rejections of record and is in condition for allowance. Favorable consideration is respectfully requested. If any unresolved issues remain, it is respectfully requested that the Examiner telephone the undersigned attorney at (703) 425-8508 so that such issues may be resolved as expeditiously as possible.

Respectfully Submitted,

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Date



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